

Bennie's Chest Pain

Instructor's Copy

Behavioral Research Aspects of Safety and
Health Group (BRASH)
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Introduction

This document contains most of the materials needed to use the exercise. The main part of the document is the instructor's copy. It tells how to use the exercise, presents the objectives, the master answer sheet, the scoring key, and discussion notes to be used following the exercise. The last part of this document is three appendices. Appendix A is the exercise problem booklet. This booklet can be duplicated locally. The booklets are reusable. One is needed for every person in the classroom. Appendix B is the answer sheet. Copies of this answer sheet must have the invisible ink answers that appear in Appendix C printed on them². Answer sheets are consumable. One is needed for each small group of 3 to 5 persons who work the exercise.

Exercise Summary

Read this section first. It determines if the exercise is appropriate for your classes. If you choose to use the exercise, examine the table of contents and review the remainder of this document.

Type: Invisible Ink

Length: Five questions

Skills First aid
Diagnosing a possible heart attack
Comforting and caring for the victim
Getting the Victim medical help as soon as possible

Location: Underground

Problem: You and Bennie are building cribs in an entry that was cut too wide. It is near the end of the shift. As you are about to finish a crib, Bennie kneels, clutches his chest, and gasps. When you question him he says he has bad chest pain and trouble breathing. Bennie wants to rest a minute and then finish the job. You must decide what to do.

² You can do this yourself if you have the proper equipment, or you may obtain copies of preprinted answer sheets from MSHA, National Mine Health & Safety Academy, Dept. of Instructional Materials, 1301 Airport Road, Beaver, WV 25813-9426 phone 304-256-3257, fax 304-256-3368 or email to MSHAdistributioncenter@dol.gov.

How to Use This Exercise

1. Look at the performance objectives. Decide if the exercise is relevant for your mine training class.
2. Work through the exercise with the developing pen and score your responses.
3. Read the master answer sheet for the exercise. Look at all the answers.
4. Read the Instructors Discussion Notes for the exercise.
5. Become thoroughly familiar with the problem so that you can present it to your class without reading it.
6. When you present the exercise to the class:
 - Give each person an exercise booklet, and each group of 3 to 5 persons one answer sheet, and a developing pen.
 - Demonstrate how to select and mark answers using the developing pen.
 - Go over the instructions for doing the exercise with the whole group.
 - Explain the problem making sure everyone understands the problem situation.
 - Have the class members work the exercise.
 - When the class members finish, have them figure up their score using the instructions at the end of the exercise.
 - When everyone has finished, discuss the exercise. Let class members discuss the merits of each answer. Add your own ideas.

Performance Objectives for Bennie's Chest Pain

Objective Number	Capability verb(s)	Description of required performance and conditions under which it is to occur
1. FA ³	Recognize Identify	Physical signs of a heart attack
2. FA	Discriminate	Signs and symptoms of a heart attack from exercise produced angina pectoris
3. FA	Recognize Select	Appropriate questions that can help assess whether the victim is undergoing a heart attack or simply an episode of exercise induced chronic angina pectoris
4. FA	Recall Select	Appropriate means to check a person for signs of a heart attack
5. FA	Recall Select Identify	Proper first aid procedures for a victim with chest pain who may be having a heart attack
6. FA	Recall	A conservative "worst case" first aid course of treatment when an ongoing heart attack is possible
7. FA	Recognize Identify	The need to stay with a potential heart attack victim to render CPR if necessary

³ Skill and knowledge domain abbreviation:
FA = first aid

Master Answer Sheet for Bennie's Chest Pain

Use this answer sheet to mark your selections. Rub the developing pen gently and smoothly between the brackets. Don't scrub the pen or the message may blur. Be sure to color in the entire message once you have made a selection. Otherwise you may not get the information you need.

Question A (Choose only ONE unless you are told to "Try Again!")

1. [Bennie may need your help now. Try again!]
2. [There is a better way to help Bennie. Try again!]
3. [Correct! Chest pain in an older person may be a sign of a heart attack. Do
[the next question.]
4. [This could be dangerous for Bennie. Try again!]
5. [There is a better way to help Bennie. Try again!
[]

Question B (Select as MANY as you think are correct.)

6. [Correct! Bennie says, "It feels like someone is stepping on my chest."]
7. [This is not a sign of heart attack.]
8. [Correct! Bennie says he feels "queasy".]
9. [This is not a sign of a heart attack.]
10. [Correct! You notice that Bennie is sweating heavily.]
11. [Correct! Bennie says, "I feel like I'm smothering."]
12. [This is not a sign of a heart attack.]

Question C (Choose only ONE unless you are told to "Try Again!")

13. [If Bennie is having a heart attack this could be dangerous. Try again!
[]
14. [Leaving Bennie alone could be dangerous. Try again!]
15. [Correct! Bennie needs to rest. You should stand by in case he needs CPR.
[Do the next question.]

Question D (Select as MANY as you think are correct.)

16. [Correct! Bennie says, "I was at the doctor's last week and he said that I was]
[just fine."]
17. [Bennie says, "None of your business." This is a bad question to ask!]
18. [Correct! Bennie says he isn't.]
19. [Correct! Bennie says he has had chest pain while working but never this bad.]

Question E (Choose only ONE unless you are told to "Try Again!")

20. [This could be dangerous. Try again!]
21. [Correct! Only by doing certain tests can a doctor tell if someone has had a]
[heart attack. END OF PROBLEM.]
22. [This could be dangerous. Try again!]
23. [This could be dangerous. Try again!]

END OF PROBLEM

Finding your score

Number of "Correct" answers you colored in = (1) _____

13 minus the number of incorrect answers you colored in = (2) _____

Add blanks one and two to get your total score = (3) _____

Highest possible score = 23

Lowest possible score = 0

Instructor's Discussion Notes for Bennie's Chest Pain

Use the information presented here and on the master answer sheet, your own ideas and experience, and those of the miners in your class to discuss the exercise after it is completed. Group discussion can help strengthen knowledge and skills, correct errors, and relate the exercise content to the experiences of the miners. After they have worked the exercise, miners enjoy discussing the problem. They also frequently think of better ways to respond to a problem than those listed among the answers. The purpose of the exercise is to help miners think about and remember basic knowledge and skills they may someday need to deal with a mine emergency. The discussion following the exercise can contribute to this goal and tailor the exercise content to the needs of the group you are training.

It is helpful to show overhead transparencies of the answers on the master answer sheet during the discussion, while the miners look at their problem booklets. This allows you to lead the group through the exercise and to discuss all the answers to each question. Most of the information about why particular answers are correct or incorrect is given on the master answer sheet.

The following notes provide additional information for you to discuss with your class. Incorporate the ideas you find here with your own ideas and make these points at the appropriate place in the discussion of the exercise.

Question A - The correct answer is 3. As indicated, chest pain in an older person may be a sign of heart attack. A victim with this sign should be tactfully encouraged to rest and be examined further. Bennie should not be left alone (4) because his problem has not yet been defined and, in the worst case, he may need CPR.

Question B - Answers 6, 8, 10 and 11 are correct. The other choices are not signs of a heart attack. The pain of a heart attack is usually described as compressing, constricting, or aching rather than sharp (7) or throbbing. In addition, the victim may express "feelings of impending doom." The pulse rate is often increased and there may be other signs of shock.

Question C - The correct answer is 15. A heart attack victim will often deny that he needs treatment but the first aider should tactfully encourage him to rest. The first aider should stand by in case CPR is required.

Question D - The correct answers are 16, 18, and 19. The victim may not know that heart problems may not be detected in a routine visit to a physician's office. According to Bailey, Hampton, and Jones, about one-fourth of the people who have heart attacks have pre-existing angina pectoris (reversible chest pain) or hypertension and may therefore be under the care of a physician. The usual treatment for angina pectoris is nitroglycerin. Asking if Bennie is taking medication will determine if he may need (or be reacting to) a prescription drug. If Bennie were carrying nitroglycerin, the first aider could have helped him take up to three tablets in ten minutes that could help relieve his symptoms.

Question E - The correct answer is 21. Given his symptoms, it is likely that Bennie is having a heart attack but only by obtaining the results of certain tests can a doctor tell for

sure. According to Bailey, Hampton, and Jones, one-fourth of those who have heart attacks die within two hours. Therefore, it is vitally important that Bennie be taken immediately to the hospital. At the minimum he should be accompanied by persons trained in CPR and, ideally, by EMT's.

References

- American Heart Association. (1985). Instructor's manual for basic life support (pp. 25-27). Dallas, TX: Author.
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- Bergeron, J. D. (1982). First Responder (pp. 191-193). Bowie, MD: Robert J. Brady Company.
- Grant, H. D., Murray, R. H., & Bergeron, J. D. (1982). Emergency care (3rd ed.) (pp. 237-241). Bowie, MD: Robert J. Brady Company.
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Scoring Key for Bennie's Chest Pain

The correct answers are marked with an asterisk.⁴

Question	Answer Number							
A	1	2	3*	4	5			
B	6*	7	8*	9	10*	11*	12	
C	13	14	15*					
D	16*	17	18*	19*				
E	20	21*	22	23				

⁴ This page is printed in large type so that it may be copied and used as an overhead transparency.

Appendix A: Problem Booklet

Duplicate this copy of the problem booklet for use in your classes. **Booklets should be printed on only one side of the paper.** Each person in your class should have a problem booklet while they are working the exercise. The problem booklets are reusable.

You may obtain a copy of the problem booklet from MSHA, National Mine Health & Safety Academy, Dept. of Instructional Materials, 1301 Airport Road, Beaver, WV 25813-9426 phone 304-256-3257, fax 304-256-3368 or email to MSHADistributioncenter@dol.gov .

Bennie's Chest Pain Exercise

Problem Booklet

Instructions

Read the problem situation described on the next page. Then answer the five questions. Do them one at a time. Don't jump ahead, but you may look back to earlier questions and your answers. Some questions direct you to choose only one answer unless you are told to "Try again!" Other questions tell you to select as many answers as you think are correct. Follow the directions for each question.

After you have selected your choice(s) to a question, look up the letter for that choice on the answer sheet. Rub the developing pen between the brackets for that choice. A hidden message will appear that tells you if the choice is correct and provide you with additional information. When you finish you will learn how to score your performance.

Bennie's Chest Pain

Background

Retreat mining is being done in 57-inch coal. The miners are blasting from the solid. You are a timberman, trained in basic first aid and CPR. Bennie Floyd is a 56-year-old general laborer. The mine phone is four crosscuts over. The portal is 1200 yards away. It is near the end of the shift.

Problem

You and Bennie are building a crib in the pillar line of the first right section off the #7 entry. The crib is almost made when Bennie stops working and clutches his chest. Look at Figure 1. Then turn to page 4 and answer the first question.



Figure 1: Bennie stops working and clutches his chest

Question A

You ask, "What's wrong?" Bennie just scowls and says, "Let's get this damn job over with." What should you do now? (Choose only ONE unless you are told to "Try Again!")

1. Finish the crib and mention Bennie's problem to the foreman when you see him.
2. Tell Bennie you won't help him until he tells you what's wrong.
3. Tell Bennie you both need a break and check him for a heart attack.
4. Tell Bennie to wait while you go get the foreman.
5. Tell Bennie to rest a minute before he begins work.

Question B

You are checking Bennie for a heart attack. What things should you look for? (Select as MANY as you think are correct.)

- 6. A crushing pain in the center of the chest which can spread.
- 7. A sharp pain below the left nipple that is worse with a deep breath.
- 8. Nausea.
- 9. Loss of vision in one eye.
- 10. Sweating.
- 11. Trouble breathing.
- 12. Weakness in one leg.

When you have made your selection(s) do the next question.

Question C

Bennie says "I'll be OK," and tries to get up. What should you do now? (Choose only ONE unless you are told to "Try Again!")

- 13. Go ahead and help Bennie finish the crib, because the shift will be over soon.
- 14. Leave Bennie and get the foreman immediately.
- 15. Tell Bennie to sit down for a while and stay with him.

Question D

You are sifting down with Bennie. What question(s) could you ask which would help you to take care of him? (Select as MANY as you think are correct.)

- 16. Are you seeing a doctor?
- 17. Who is your next of kin?
- 18. Are you taking any medication?
- 19. Have you ever had this type of pain before?

When you have made your selection(s) do the next question.

Question E

After about two minutes the foreman comes by. You explain what has happened. Bennie tells the foreman that he still has chest pain but he thinks he can finish the shift that only has an hour to go. What should the foreman do now? (Choose only ONE unless you are told to "Try Again!")

20. Let Bennie finish the shift but tell him to see a doctor.
21. Have another miner and an EMT transport Bennie out of the mine and to the hospital.
22. Tell Bennie to rest until the shift ends so that he can go out with the rest of the crew and not hold up production.
23. Tell Bennie to take a scoop on out by himself and report to the surface first aid station.

End of Problem

Scoring your performance

1. Count the total number of responses you colored in that were marked "correct". Write this number in the first blank on the answer sheet.
2. Count the total number of incorrect responses you colored in. Subtract this number from 13. Write the difference in the second blank on the answer sheet.
3. Add the numbers on the first and second blanks. This is your score.

The best possible score of 23 results from selecting all the correct answers and no wrong answers. The worst possible score of zero results from selecting all the wrong answers and no correct answers.

Appendix B: Answer Sheet Blanks

These are the answer sheet blanks. Copies of these blank answer sheets may be duplicated in the normal fashion. However, the answers that are found within the brackets must be printed on these blank answer sheets in invisible ink. These answers are found in Appendix C. If you have the capability to print invisible ink, make copies of the blank answer sheets. Make a master of the answers that appear in Appendix C. Then print the invisible ink on the blank answer sheets, being careful to make sure all pages print and that the appropriate answers line up with the appropriate blanks. The Master Answer Sheet shows all the answers in their proper places.

Most companies and trainers prefer to obtain copies of the preprinted answer sheets from MSHA, National Mine Health & Safety Academy, Dept. of Instructional Materials, 1301 Airport Road, Beaver, WV 25813-9426 phone 304-256-3257, fax 304-256-3368 or email to MSHADistributioncenter@dol.gov.

The exercise is designed to be used in small groups. You will need one answer sheet for each group of 3 to 5 persons in your class. The answer sheets are consumable. You will need a new set for each class.

A special developing pen is also needed by each group of 3 to 5 persons who marks an answer sheet. These are "PENIB" and may be obtained from SICPA Customer Service, 8000 Research Way, Springfield, VA 22153, phone 1-888-742-7287.

Answer Sheet for Bennie's Chest Pain

Use this answer sheet to mark your selections. Rub the developing pen gently and smoothly between the brackets. Don't scrub the pen or the message may blur. Be sure to color in the entire message once you have made a selection. Otherwise you may not get the information you need.

Question A (Choose only ONE unless you are told to "Try Again!")

1. []
2. []
3. []
[]
4. []
5. []
[]

Question B (Select as MANY as you think are correct.)

6. []
7. []
8. []
9. []
10. []
11. []
12. []

Question C (Choose only ONE unless you are told to "Try Again!")

13. []
[]
14. []
15. []
[]

Question D (Select as MANY as you think are correct.)

16. []
[]

17. []

18. []

19. []

Question E (Choose only ONE unless you are told to "Try Again!")

20. []

21. []
[]

22. []

23. []

END OF PROBLEM

Finding your score

Number of "Correct" answers you colored in = (1) _____

13 minus the number of incorrect answers you colored in = (2) _____

Add blanks one and two to get your total score = (3) _____

Highest possible score = 23

Lowest possible score = 0

Appendix C: Invisible Ink Answers

These pages contain the answers that must be printed in the blanks of the answer sheet in Appendix B. These answers are spaced and sequenced correctly so that they match up exactly with the appropriate blanks on the answer sheet blank.

Once the answers have been printed in the answer sheet blanks, the developing pen reveals the formerly invisible printed message.

You may obtain preprinted answer sheets or you may prepare your own copies. To learn more about these options, and to determine how many answer sheets and developing pens you will need, see the introductory section of the Instructor's Copy.

Bennie may need your help now. Try again!

There is a better way to help Bennie. Try again!

Correct! Chest pain in an older person may be a sign of a heart attack. Do the next question.

This could be dangerous for Bennie. Try again!

There is a better way to help Bennie. Try again!

Correct! Bennie says, "It feels like someone is stepping on my chest."

This is not a sign of heart attack.

Correct! Bennie says he feels "queasy".

This is not a sign of a heart attack.

Correct! You notice that Bennie is sweating heavily.

Correct! Bennie says, "I feel like I'm smothering."

This is not a sign of a heart attack.

If Bennie is having a heart attack this could be dangerous. Try again!

Leaving Bennie alone could be dangerous. Try again!

Correct! Bennie needs to rest. You should stand by in case he needs CPR. Do the next question.

Correct! Bennie says, "I was at the doctor's last week and he said that I was just fine."

Bennie says, "None of your business." This is a bad question to ask!

Correct! Bennie says he isn't.

Correct! Bennie says he has had chest pain while working but never this bad.

This could be dangerous. Try again!

Correct! Only by doing certain tests can a doctor tell if someone has had a heart attack. END OF PROBLEM.

This could be dangerous. Try again!

This could be dangerous. Try again!